The characteristics of poly(methyl methacrylate) nanofibers using the electrospinning as moisture absorbent

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We studied the properties of electrospun nanofibers with poly(methyl methacrylate) to improve several problems which don't excluded the oxygen and moisture from the edge. Electrospinning is one of the most popular techniques for generating fibers with the diameters ranged from tens of nanometers to several micrometers. As polymer we used, PMMA is often preferred because of its moderate properties, easy handling and processing, and low cost. It swells and dissolves in many organic solvents and also has poor resistance to many other chemicals on account of its easily hydrolyzed ester groups. Nevertheless, its environmental stability is superior to most other plastics. PMMA has a maximum water absorption ratio of 0.3–0.4% by weight. We observed how the characteristics of nanofibers changed according to contents of CaO added to PMMA solution. And we measured to know that absorbed moisture amount is more higher as the content of CaO increases.